BISS Biodiversity Information Science and Standards

Biodiversity Information Science and Standards 3: e35747
doi: 10.3897/biss.3.35747

OPEN ACCESS

Conference Abstract

The Swedish Taxonomy Initative & Biodiversity Infrastructure

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Received: 25 Apr 2019 | Published: 18 Jun 2019

Citation: Sjödin Skarp L (2019) The Swedish Taxonomy Initative & Biodiversity Infrastructure. Biodiversity Information Science and Standards 3: e35747. https://doi.org/10.3897/biss.3.35747

Abstract

The Swedish Species Information Centre (ArtDatabanken, SSIC) at the Swedish University of Agricultural Sciences (SLU) accumulates, analyses and disseminates information concerning Swedish species, habitats and ecosystems. The SSIC hosts the Swedish Taxonomy Initiative (STI) and produces the Swedish Red List. In addition, the SSIC is the leading partner within the Swedish LifeWatch (SLW) consortium, which cooperates with the Biodiversity Atlas Sweden (BAS) and the Living Atlas Community.

The SSIC provides an open access biodiversity reporting and analysis infrastructure including for example the Swedish Species Observation System (artportalen.se), the Swedish taxonomic backbone (dyntaxa.se) and tools for species information including traits, terminology and species determination (artfakta.se). All systems, including the SLW Analysis Portal (analysisportal.se), rely on recognized standards to ensure interoperability and consist of databases, API:s and portals. The Artportalen platform now contains >69 000 000 georeferenced observations, along with 1 300 000 images, video or sound, of some 32 000 species from Sweden. The data are harvested by SLW and the Global Biodiversity Information Facility (GBIF). In addition to reports from NGOs and the general public, which generate >90% of the observations, a rapidly increasing number of Swedish governmental authorities and agencies are using the platform to store regional and local species inventories collected by standardized scientific methods. There are sophisticated systems for validation and to secure data quality, and the records are used by scientists as

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well as by county and municipality councils as a principle biodiversity resource in environmental planning and decision making. Data concerning some species considered to be particularly sensitive to disturbance are classified and not openly available. These data can be accessed via a hierarchy of access levels so as to enable such classified data to available to, for example, environmental officers and to be used in management purposes The SSIC has just launched new API:s, modules for improved reporting of species checklists and invasive species, and a new platform aggregating the services in a single web interface and based on responsive design and specific interfaces for different users (artfakta.se). Improvements are also to be made in the infrastructure of the Swedish taxonomic backbone, which now contains data for almost all Swedish species (more than 275 000 scientific names and 62 000 species).

In 2002, when the Swedish Taxonomy Initiative (STI) was established, the SSIC was commissioned by the Swedish Parliament to identify all species of multicellular plants, fungi and animals in the country and to make the information available to scientists, conservationists and the public. The information is presented in the Artfakta platform and in a series of identification handbooks, The Encyclopedia of the Swedish Flora and Fauna. In addition, the STI supports barcoding activities, scientific courses and announces grants for museums and taxonomic research and inventories within poorly known organismal groups. The Swedish and Norwegian taxonomy initiatives work cooperatively to increase the collective knowledge of poorly known species and, as a result, more than 3 000 species new to Sweden and Norway have been found, approximately a third being new to science. The attempt to join forces between different Scandinavian counterparts via technical progress and to focus on digitalization and sharing information on species and communities from the same biogeographical region has proven a successful concept.

Keywords

Biodiversity infrastructure, taxonomy, species information, determination keys, Citizen Science

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The Swedish Species Information Centre (ArtDatabanken, SSIC) at the Swedish University of Agricultural Sciences (SLU)